

NC 105 Improvements
From Clark's Creek Road (SR 1136) to NC 105 Bypass (SR 1107) in Boone
Watauga County
State Project 37512.1.5
NHPP-0150(004)

TIP Project R-2566B

FINDING OF NO SIGNIFICANT IMPACT

U.S. Department of Transportation
Federal Highway Administration
and
North Carolina Department of Transportation
Division of Highways

Submitted pursuant to the National Environmental Policy Act 42 U.S.C. 4332(2)(C)

APPROVED:
6/29/2018

Date

DocuSigned by:
Derrick Weaver, P.E.
047D90B49865400...

Derrick Weaver, P.E., Team Lead - Divisions 11-14
Project Management Unit
North Carolina Department of Transportation

6/29/2018

Date

DocuSigned by:
Clarence Coleman, P.E.
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John F. Sullivan III, P.E., Division Administrator
Federal Highway Administration

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Document prepared by Kimley-Horn and Associates, Inc.
for the North Carolina Department of Transportation

June 2018

6/29/2018

DocuSigned by:

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Date

Eugene Tarascio, Project Manager - Divisions 7, 9, & 10
Project Management Unit
North Carolina Department of Transportation

6/29/2018

DocuSigned by:

E67C91DDF5AA4DC...

Date

Teresa Gresham, P.E., Project Manager
Kimley-Horn and Associates, Inc.

Project Commitments

NC 105 Improvements
From Clark's Creek Road (SR 1136) to NC 105 Bypass (SR 1107) in Boone
Watauga County
State Project 37512.1.5
NHPP-0150(004)

TIP Project R-2566B

Due to the high quality waters and trout waters throughout the project corridor, Design Standards in Sensitive Watersheds will be implemented.

Based on a recommendation from the North Carolina Wildlife Resources Commission (NCWRC), a moratorium will be placed on in-stream work and land disturbance to the 25-foot trout buffer from October 15th to April 15th for the entire corridor, to protect reproducing trout.

The NCDOT Biological Surveys Group will be notified thirty days prior to demolition in order to perform a pre-demolition bridge check for listed bat species.

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1. Type of Action

This Finding of No Significant Impact (FONSI) is a Federal Highway Administration (FHWA) administrative action.

The North Carolina Department of Transportation (NCDOT) and FHWA have selected the Best-Fit Build Alternative for this project and have determined that the selected alternative will not have significant adverse impacts on the human or natural environments. This FONSI is based on the Environmental Assessment (EA), which was independently evaluated by the FHWA and determined to adequately and accurately discuss the environmental issues and impacts of the proposed project. After the EA was distributed, NCDOT announced and held a public hearing. Agency and citizen comments were recorded and considered (see **Appendices A and B**) prior to final decisions being made. The EA was approved by the FHWA on September 23, 2016 and provides sufficient evidence and analysis for determining that an Environmental Impact Statement is not required.

2. Description of Proposed Action

NCDOT proposes to improve NC 105 from Clark's Creek Road (SR 1136) to NC 105 Bypass (SR 1107) in Boone, Watauga County. **Figure 1** shows the vicinity of the project.

This project is included in the 2018-2027 NCDOT *State Transportation Improvement Program* (STIP) as Project R-2566B. The purpose of the project is to reduce congestion on NC 105, reduce rear-end and run-off road crashes, and improve bicycle facilities.

The project corridor is 5.5 miles long. No improvements are recommended on the 1-mile section between Clark's Creek Road and the southern intersection of NC 105 and Old Shull's Mill Road. The following improvements are recommended:

- The section between Old Shull's Mill Road and Broadstone Road will consist of two 12-foot lanes (one in each direction) with 6-foot wide paved shoulders on both sides. The current design proposes to extend the existing climbing lane (located near Old Shull's Mill Road) to Broadstone Road.
- The section between Broadstone Road and NC 105 Bypass will consist of four 12-foot lanes, a 23-foot wide raised median and 6-foot wide paved shoulders.
- In addition to widening, the two intersections where Old Shull's Mill Road tees into NC 105 have safety concerns. These are referenced as "Old Shull's Mill Road (north)" and "Old Shull's Mill Road (south)." To address these issues, the southern intersection (NC 105/Old Shull's Mill Road (south)) will be realigned, and the northern intersection (NC 105/Old Shull's Mill Road (north)) will be closed.

Replacement of the bridge that carries NC 105 over the Watauga River north of the Broadstone Road intersection is funded separately in the STIP as R-2566BA. Project R-2566BA is included in this environmental document.

The current funding for this project is federal National Highway Performance Program (NHPP) funds. Based on the draft 2018-2027 STIP:

- Project R-2566B: Right of Way acquisition is currently scheduled to begin in Fiscal Year (FY) 2021, and construction is scheduled to begin in FY 2023.
- Project R-2566BA: Right of Way acquisition is scheduled for FY 2018, and construction is scheduled to begin in FY 2019.

3. Alternatives Considered

The Interagency Merger team agreed to carry two alternatives forward for detailed study, a Best-Fit Build Alternative that would improve NC 105 from Clark’s Creek Road to NC 105 Bypass using the fewest improvements that would result in meeting the purposes of the project and a No Build Alternative for comparison.

The team agreed not to make improvements in the southernmost 1-mile section where no additional congestion or safety needs were identified. This section was retained in the environmental documents because it was within the agreed-upon logical termini.

The draft 2018-2027 STIP includes \$59.3 million for R-2566B and \$1.5 million for R-2566BA. **Table 1** summarizes the estimated costs for the Project R-2566B Best-Fit Build Alternative.

Table 1. Cost Estimate

Best-Fit Build Alternative Item	Total Cost Estimate (in millions)
Construction	\$47,600,000
Utility Relocation	\$7,166,874
Right of Way	\$10,171,000
Total	\$64,937,874

4. Selected Alternative

The Best-Fit Build Alternative was identified as the “least environmentally damaging practicable alternative” (LEDPA) by the Interagency Merger group on March 15, 2017, completing Concurrence Point 3 of the Section 404/NEPA Merger Process.

The Best-Fit Build Alternative was designed to avoid or minimize impacts to the Watauga River and Laurel Fork. Requirements for mitigation and additional avoidance and minimization measures will be determined through coordination with the Interagency Merger Team as part of the permit and Concurrence Point 4B & 4C Merger meetings.

5. Summary of Project Impacts

This section presents a description of the impacts of the Best-Fit Build Alternative. **Table 2** provides a summary of impacts for the Best-Fit and No Build alternatives.

Table 2. Impacts of Detailed Study Alternatives

Topic	Best-Fit Build Alternative	No Build Alternative
Railroad Crossings	0	0
Schools	0	0
Recreational Areas & Parks	0	0
Churches	0	0
Cemeteries	0	0
Major Utility Crossings	8*	0
Impacts to National Register Eligible Resources	0	0
Archaeological Sites	0	0
Federally-Listed Species within Study Area	<i>6 No Effect, 2 May Affect, Not Likely to Adversely Affect, 1 Section 4(d) rule, 2 No Biological Conclusion Required**</i>	No Effect
100-Year Floodplain Crossings	1	0
Prime and Unique Farmland	0	0
Residential Relocations	17	0
Business Relocations	11	0
Hazardous Material Sites	6	0
Wetland Impacts	<i>0.31 acres</i>	0
Stream Crossings	<i>28</i>	0
Stream Impacts	<i>2,410 feet</i>	0
Traffic Noise Impacts (# of receptors)	29	0
Water Supply Watershed Protected Areas	0	0
Wildlife Refuges & Game Lands	0	0
Section 4(f) Impacts (Historic)	0	0
Low Income Population Disproportionate and Adverse Impacts	0	0
Minority Population Disproportionate and Adverse Impacts	0	0
Total Cost Estimate (in millions)	\$64,937,874	\$0
Construction Cost	\$47,600,000	\$0
Utility Relocation Cost	\$7,166,874	\$0
Right of Way Cost	\$10,171,000	\$0

Note: impacts in italics have been updated since the EA; see Section 8 of this FONSI.

* Major power line crossings, in addition to smaller service drops.

**A biological conclusion is not required for the bog turtle because it is threatened due to similarity of appearance. A biological conclusion is not required for the rusty patched bumble bee (RPBB) because the USFWS does not and will not require surveys for RPBB in North Carolina because USFWS assumes the state is unoccupied by RPBB. NCDOT has determined that the proposed action does not require separate consultation for the northern long-eared bat (NLEB) on the grounds that the proposed action is consistent with the final Section 4(d) rule, codified at 50 C.F.R. 17.40(o) and effective February 16, 2016. NCDOT may presume its determination is informed by best available information and consider Section 7 responsibilities fulfilled for NLEB.

6. Coordination and Comments

The following section provides a summary of the agency coordination and public involvement efforts that took place after approval of the EA.

6.1 Circulation of the Environmental Assessment

The EA for this project was approved by the NCDOT and FHWA in September 2016. The EA was made available for public review at the following locations:

- NCDOT Division 11 Office, 801 Statesville Road, North Wilkesboro
- High Country Rural Planning Organization Office – 468 New Market Boulevard, Boone
- Public Meetings Website: www.ncdot.gov/projects/publicmeetings
- Project Website: www.ncdot.gov/projects/nc105widening/

Copies of the approved EA were circulated to the following federal, state, and local agencies for review and comments. Comments were received from those marked with an asterisk (*). Agency comments are provided in **Appendix A**.

Federal Agencies

- U.S. Army Corps of Engineers (USACE)
- * U.S. Environmental Protection Agency (USEPA)
- U.S. Department of Interior, Fish and Wildlife Service (USFWS)

State Agencies

- N.C. Department of Administration – State Clearinghouse
- N.C. Department of Cultural Resources – Division of Historical Resources (NCDCCR – HPO)
- * N.C. Wildlife Resources Commission
- * N.C. Department of Environmental and Natural Resources (NCDENR)
- N.C. Division of Emergency Management – Floodplain Management Program
- N.C. Department of Agriculture

Local Agencies

- High Country Rural Planning Organization
- Watauga County

6.2 Agency Comments Received on the Environmental Assessment

The following project-specific comments were provided on the Environmental Assessment:

U.S. Environmental Protection Agency (November 14, 2016)

Comment: The EPA generally supports the proposed project's Purpose and Need and the Build Alternative.

NC Department of Environment and Natural Resources – Division of Water Resources (December 1, 2016)

Comment: Because the Watauga River, Laurel Fork and their tributaries are trout waters of the state, the NCDWR recommends the most protective sediment and erosion control BMPs be implemented, and buffer disturbances be conducted in accordance with NCDLR [NC Division of Land Resources] and NCWR [NC Wildlife Resources] Commission requirements.

Water quality requirements per 401 Water Quality Certification and NCDOT NPDES permit requirements should also be met.

Response: NCDOT will continue to coordinate with the appropriate agencies to obtain the necessary permits and approvals for project design and construction to ensure that best management practices are implemented to maintain water quality, trout habitat and minimize water resource impacts.

NC Wildlife Resources Commission (December 9, 2016)

Comment: NCWRC feels the current design does not make the fewest improvements possible while minimizing impacts along the corridor. They are particularly concerned about portions of the proposed 3-lane section where the Watauga River is in closer proximity to the roadway and steep mountainous terrain occurs on the opposite side of the road. They recommend discontinuing the proposed climbing lane in areas where the space between the river and the mountain narrows, such as the stretch south of Broadstone Road.

They recommend avoiding or minimizing impacts to the river floodplain and natural vegetated buffer that protects water quality and serves as habitat and a travel corridor for wildlife. They also recommend avoiding or minimizing cuts into the mountainsides to prevent additional sediment sources and to preserve habitat and aesthetic qualities. Avoiding impacts to the mountainsides and riparian corridor along the river appear to be in line with local plans.

NCWRC recommends providing wildlife crossings, and requests additional investigation into the issue of collisions with wildlife to help determine the need for formal wildlife crossings.

Stormwater treatment and other low-impact design measures will be important for both the direct impacts of the project and future development to protect important sensitive resources.

Context sensitive solutions are recommended to minimize impacts to aquatic and terrestrial resources along the project and ensure compatibility with the natural and human environmental of the area. Further minimization of the footprint and impacts should be pursued for all portions of the project. NCWRC encourages NCDOT and local officials to work together and use low impact development techniques to maximize the management of storm water quantity and quality in the project area.

Response: NCDOT and the rest of the Merger Team have discussed these concerns in detail at the Concurrence Points 3 and 4A meetings. Commitments and agreements are listed in Section 6.4. Additional minimization and avoidance measures will be discussed at the Concurrence Points 4B and 4C meetings, which will be held before Section 404 and 401 permit applications are submitted.

6.3 Public Hearing

In accordance with 23 USC 128, NCDOT certifies that a Public Hearing for the subject project has been held and the social, economic, and environmental impacts; consistency with local community planning and goals and objectives; and comments from individuals have been considered in the selection of the Best-Fit Build Alternative for the project.

The Public Hearing began at 4:00 p.m. on Monday, November 7, 2016. It was held at the Watauga Campus of Caldwell Community College and Technical Institute. The meeting was open house-style with no formal presentation. Interested citizens were able to attend any time between 4:00 to 7:00 p.m. Public hearing maps for the study alternative were available for review.

Nearly 100 people attended the Public Hearing. Written comments were received from 25 citizens. There were no verbal comments. A number of citizens expressed the project is unnecessary, several others commented on intersection design details and other design concerns. Other concerns were expressed about property impacts. All written comments returned at the public hearing or during the comment period are summarized in **Appendix B**. Responses to these comments are also included in **Appendix B** in the form of the Post Hearing Meeting Summary.

6.4 Section 404/NEPA Merger Process

Following approval of the EA and the public hearing, two Merger meetings have been held:

- *Concurrence Point 3: LEDPA/Preferred Alternative Selection.* The alternative selected as the "least environmentally damaging practicable alternative" or LEDPA (NEPA preferred alternative), through the project development and permitting process.
 - At a Merger meeting on March 15, 2017, the Merger team agreed that the Best-Fit Build Alternative is the LEDPA for Project R-2566B.

- *Concurrence Point 4A: Avoidance and Minimization.* A detailed, interdisciplinary and interagency review to optimize the design and benefits of the project while reducing environmental impacts to both the human and natural environment.
 - At a Merger meeting on July 19, 2017, the Merger team agreed to the following commitments:
 - The feasibility of holding the existing utility line between Old Shull's Mill Road (north) and Broadstone Road will be investigated.
 - Temporary construction easements will be kept outside of the 100-year floodplain, floodway, and Watauga River where feasible.
 - Permanent construction and slope stakes will stay out of the 100-year floodplain, floodway, and Watauga River. If not feasible, the Merger Team will revisit 4A.
 - Section BA [the bridge over the Watauga River] will not be constructed until sufficient information is available to apply for a phased permit.

Copies of the signed Concurrence Point forms are included in **Appendix C**.

6.5 Eastern Band of Cherokee Consultation

A consultation with the Eastern Band of Cherokee is required for this project. The Eastern Band of Cherokee were provided information on the proposed project in April 2018 and given the opportunity to comment by May 18, 2018 which meets the consultation requirement. No comments have been received as of the approval date of the FONSI.

7. Revisions to the Environmental Assessment

7.1 Stream and Wetland Impacts

The stream and wetland impacts reported in Section V of the Environmental Assessment were based on the stream banks (rather than the centerline of the streams) for Laurel Fork, Watauga River, and Big Branch. It measured the number of streams impacted as the number of streams that encroach onto the project corridor from both sides.

Impacts were recalculated based on stream centerlines, and totaling streams and wetlands that encroach into either one or both sides of the project corridor (rather than those that cross both sides of the corridor). The estimated project impacts are listed in the table below. These changes supersede values in Tables S1, 11, 12, and 16 in the EA.

Table 3. Changes in Stream and Wetland Impacts

Resource	Anticipated Impact Reported in EA*	Revised Anticipated Impact*
Number of Streams	19	28
Linear Feet of Streams	3,270 feet	2,410 feet
Acres of Wetlands	0.2 acres	0.31 acres

* Anticipated impacts for the Best-Fit Alternative, based on a 25-foot buffer around proposed slope stakes

7.2 Threatened and Endangered Species

Since approval of the EA, the list of federally-protected species for Watauga County has changed. The following information is amended to Section V.A.3 of the EA.

Since completion of the EA, the gray bat has been added to the list of federally protected species for Watauga County.

Based on survey field work completed by NCDOT in June 2018, the following biologic conclusions were made for the gray bat, northern long-eared bat (NLEB), and Virginia big-eared bat, which have received concurrence from the USFWS in a letter dated June 28, 2018.

Gray bat: Based on the presence of other species of bats using Bridge No. 298 within the project study area, although 1 mile from the construction limits, the proposed project will have a biological conclusion of **May Affect, Not Likely to Adversely Affect**.

Northern long-eared bat (NLEB): **NCDOT has determined that the proposed action does not require separate consultation on the grounds that the proposed action is consistent with the final Section 4(d) rule, codified at 50 C.F.R. 17.40(o) and effective February 16, 2016. NCDOT may presume its determination is informed by best available information and consider Section 7 responsibilities fulfilled for NLEB.**

Virginia big-eared bat (COTO): Based on the location of known hibernacula, known maternity roosts, spring time roosts, as well as the presence of roosting habitat, the proposed project will have a biological conclusion of **May Affect, Not Likely to Adversely Affect** for Virginia big-eared bats.

The hellbender has been petitioned for inclusion on the list but as of approval of this document, has not been listed. The Species Status Assessment (SSA) report, expected to be completed in September 2018, will inform the 12-month finding by the U.S. Fish and Wildlife Service (Service) whether the Eastern Hellbender (*Cryptobranchus alleganiensis alleganiensis*) warrants listing as threatened or endangered under the Endangered Species Act of 1973, as amended. NCDOT will coordinate with USFWS if the SSA report and review process results in the species being proposed for listing.

A biological conclusion is not required for the rusty patched bumble bee (RPBB) because the USFWS does not and will not require surveys for RPBB in North Carolina because USFWS assumes the state is unoccupied by RPBB.

7.3 Archaeological Survey

The N.C. Department of Transportation (NCDOT) first provided scoping information for the NC 105 improvements to the State Historic Preservation Office (HPO) on September 7, 2004. On February 23, 2005 HPO recommended that a comprehensive archaeological survey be conducted to identify and evaluate the significance of archaeological remains that may be damaged or destroyed by the proposed project (ER 04-2452). The NCDOT Archaeology Group began its review for the project in March 2012 (TIP R-2556) as "NC 105 Improvements from Linville to Boone in Avery and Watauga Counties." The scope of the project was later reduced to include only the segment from Foscoe to Boone in Watauga County.

In April 2016 the project was submitted for archaeology review under the Programmatic Agreement (PA) for Minor Transportation Projects between the Federal Highway Administration (FHWA), NCDOT, the Advisory Council on Historic Preservation (ACHP), and HPO (as PA #16-04-0010). The PA transferred the authority for cultural resources reviews for minor transportation projects from HPO to the NCDOT cultural resource groups (Archaeology and Historic Architecture and Landscapes). The PA stipulates the expanded authority of NCDOT's cultural resource groups in identifying and evaluating historic properties and assessing effects on historic properties in conjunction with minor transportation projects.

The Archaeology Group found that most of the landforms within the Area of Potential Effects (A.P.E.) of the project had a low potential for archaeological sites. It identified only one section of the A.P.E. with potential, the area around the NC 105/ SR 1568 (Old Shull's Mill Road) interchange. The Archaeology Group completed an Archaeological Survey Required form in May 2016 (revised in March 2017). The form included a reconnaissance report which described the potential (or lack thereof) for archaeological sites within the A.P.E.

An archaeological survey of the NC 105/ SR 1568 (Old Shull's Mill Road) interchange area was conducted in April 2017. The survey re-visited a previously recorded site (31WT371**), and recorded site 31WT396** next to it. These sites are believed to be the former locations of the Robbins Hotel and an unidentified business which had supported the Boone Fork Lumber Company, a lumber mill that had been located a short distance to the east. Both sites are recommended ineligible for the National Register of Historic Places (NRHP), and no further archaeological work is recommended for this project. The No NRHP-Listed or Eligible Sites Present form describing the results of the archaeological survey was submitted in May 2017. The form included both the reconnaissance report and the archaeological survey report. The cover sheets of the No NRHP-Listed or Eligible Sites Present form are included in the Appendices. The reconnaissance report and archaeological survey report are on file at NCDOT and HPO.

8. Wetlands Finding

In accordance with 33 CFR 328.3(b) and 23 CFR 777, 27 jurisdictional wetlands were identified and delineated within the project study area. Each wetland included the presence of hydrophytic vegetation, the presence of hydric soils, and evidence of wetland hydrology. Jurisdictional verification of the wetlands and streams occurred on May 16, 2013 with a representative of the USACE.

The Best-Fit Build Alternative impacts approximately 0.31 acres of Section 404 wetlands. NCDOT was unable to completely avoid impacts to wetlands. It was determined that there is no practicable alternative to the proposed construction in wetlands and that the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use. Unavoidable impacts to jurisdictional areas will be mitigated by payment to an approved mitigation bank (if available) or payment to the North Carolina Department of Environmental Quality Division of Mitigation Services (DMS).

9. Floodplain Finding

A number of streams in the project study area are located in Federal Emergency Management Agency (FEMA) regulated floodways. Therefore, a no-rise hydraulics study or a Conditional Letter of Map Revision (CLOMR) will be required for encroachments. This will occur during the final design process.

10. Basis for Finding of No Significant Impact

The EA documents a study of the impacts of the proposed project. Based upon this study and on comments received from federal, state, local agencies and the general public, it is the finding of the FHWA that this project will not have a significant impact upon the human or natural environment. No significant impacts to natural, social, ecological, cultural, economic, or scenic resources are expected. The proposed project is consistent with local plans. The project has been extensively coordinated with federal, state, and local agencies. In view of this evaluation, it has been determined that a FONSI is applicable for this project. Therefore, neither an Environmental Impact Statement nor further environmental analysis is required.

The following individuals can be contacted for additional information on the proposed project:

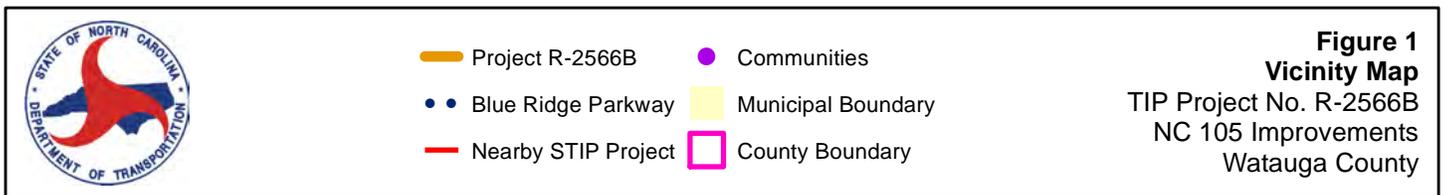
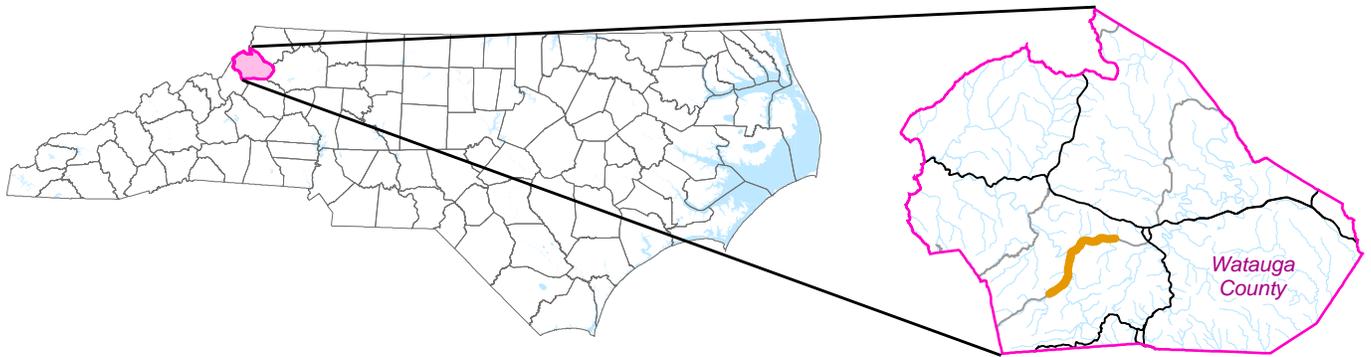
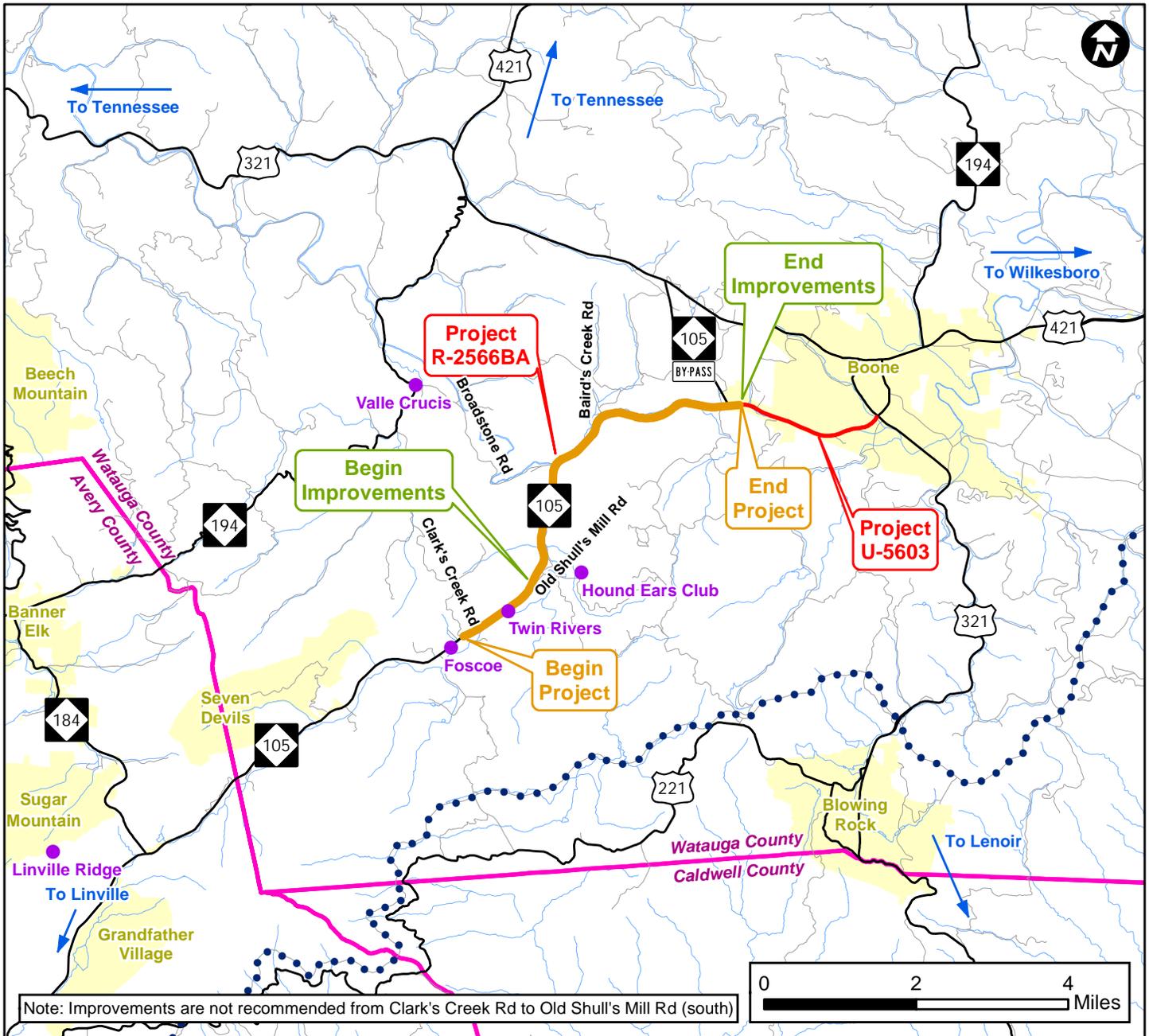
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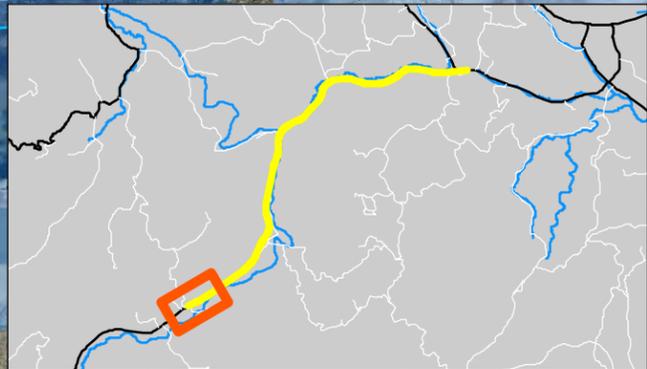
Division Administrator
Federal Highway Administration
310 New Bern Avenue, Suite 410
Raleigh, North Carolina 27601
Telephone: (919) 856-4346

Derrick Weaver, P.E.

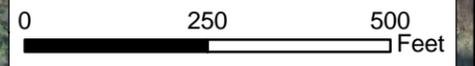
Senior Project Manager
Central Project Delivery Team
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, North Carolina 27699-1548
Telephone: (919) 707-6000

FIGURES



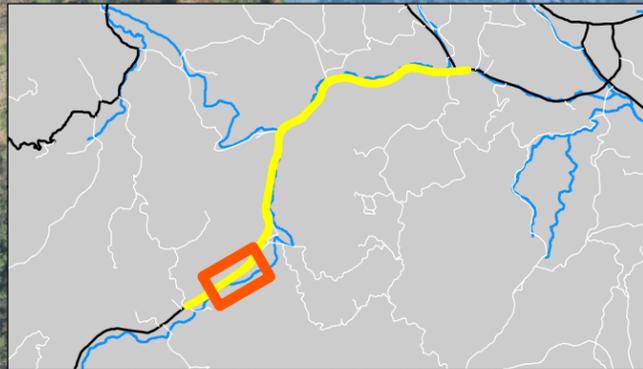


Note: Improvements are not recommended from Clark's Creek Rd to Old Shull's Mill Rd (south) and are therefore not shown on this figure.



- | | | | | |
|-------------------------|-------------------------|--------------------------------------------|-------------------|-------------------|
| Stream | Proposed Striping | Proposed Construction Limits | Proposed Median | Floodway |
| Proposed Bridge | Proposed Paved Shoulder | Proposed Drainage Structure to be Replaced | Historic Property | 100-Yr Floodplain |
| Proposed Edge of Travel | Proposed Retaining Wall | Proposed Removal of Asphalt Pavement | | |

Figure 2A
Design and Surrounding Features
 TIP Project No. R-2566B
 NC 105 Improvements
 Watauga County



- | | | | | |
|-------------------------|-------------------------|--------------------------------------------|-------------------|-------------------|
| Stream | Proposed Striping | Proposed Construction Limits | Proposed Median | Floodway |
| Proposed Bridge | Proposed Paved Shoulder | Proposed Drainage Structure to be Replaced | Historic Property | 100-Yr Floodplain |
| Proposed Edge of Travel | Proposed Retaining Wall | Proposed Removal of Asphalt Pavement | | |



Figure 2B
Design and Surrounding Features
 TIP Project No. R-2566B
 NC 105 Improvements
 Watauga County



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|-------------------------|-------------------------|--------------------------------------------|-------------------|-------------------|
| Stream | Proposed Striping | Proposed Construction Limits | Proposed Median | Floodway |
| Proposed Bridge | Proposed Paved Shoulder | Proposed Drainage Structure to be Replaced | Historic Property | 100-Yr Floodplain |
| Proposed Edge of Travel | Proposed Retaining Wall | Proposed Removal of Asphalt Pavement | | |

Figure 2C
Design and Surrounding Features
 TIP Project No. R-2566B
 NC 105 Improvements
 Watauga County

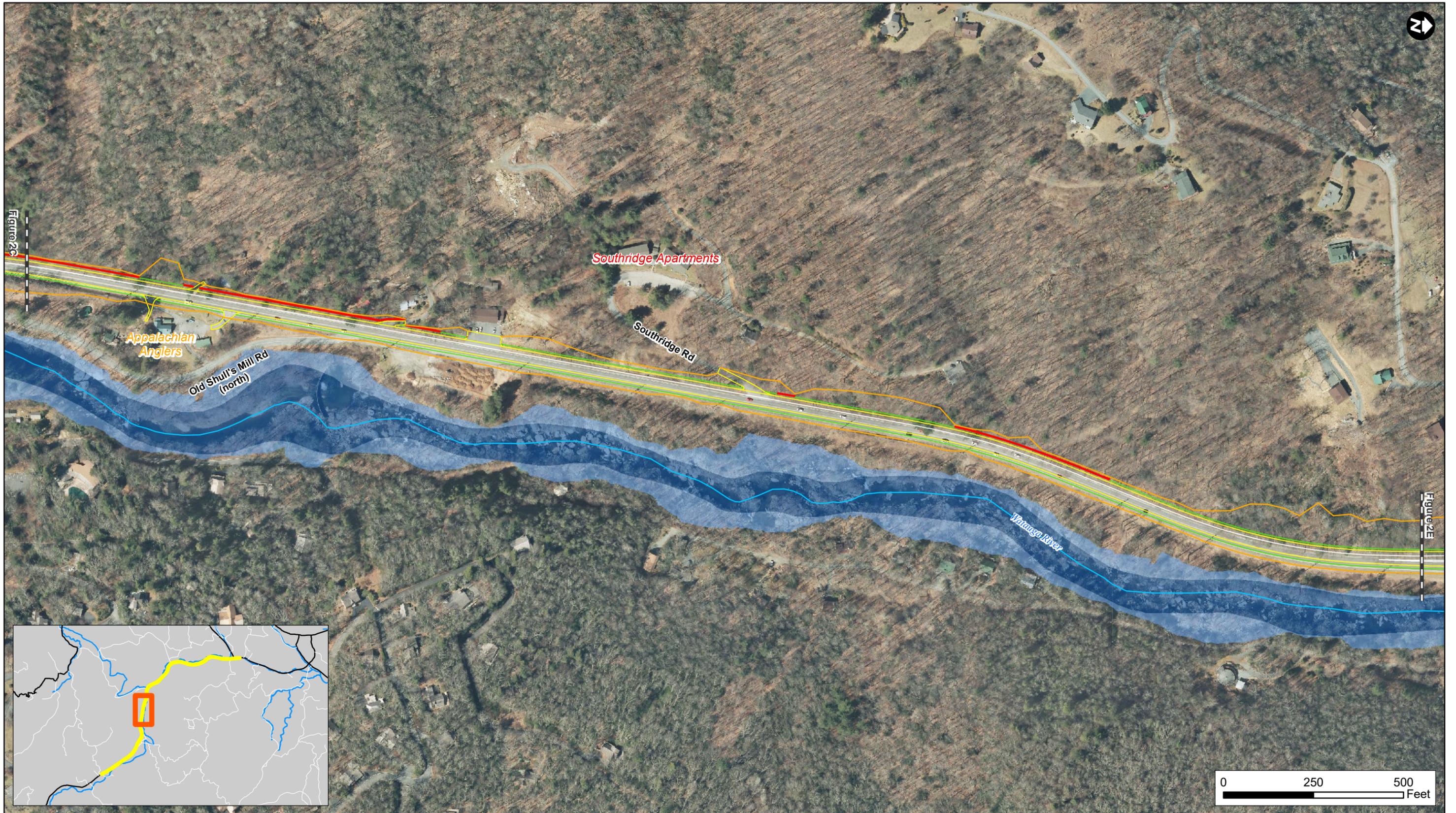
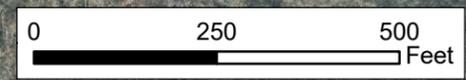
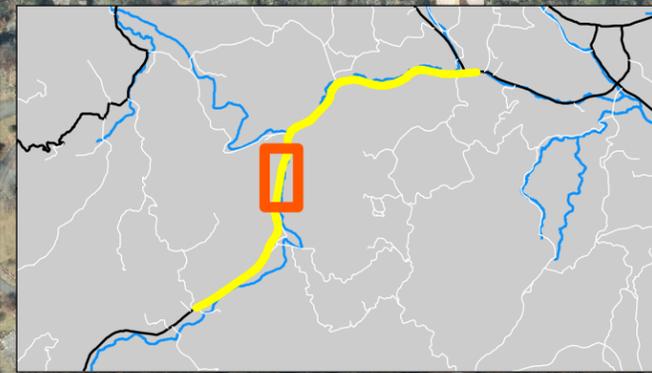


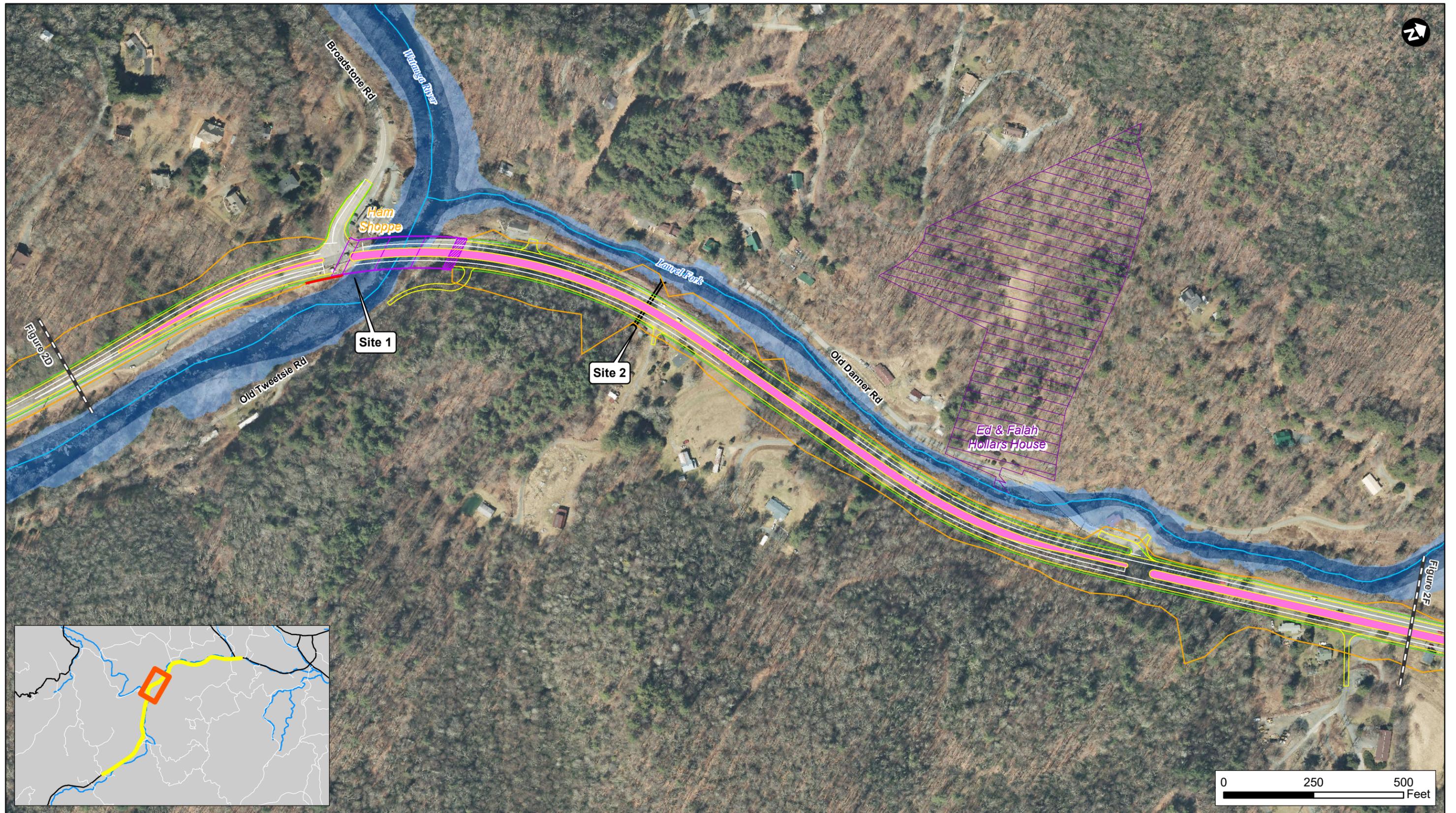
Figure 2c

Figure 2e



- Stream
- Proposed Bridge
- Proposed Edge of Travel
- Proposed Striping
- Proposed Paved Shoulder
- Proposed Retaining Wall
- Proposed Construction Limits
- Proposed Drainage Structure to be Replaced
- ▣ Proposed Removal of Asphalt Pavement
- ▣ Proposed Median
- ▣ Historic Property
- ▣ Floodway
- ▣ 100-Yr Floodplain

Figure 2D
Design and Surrounding Features
 TIP Project No. R-2566B
 NC 105 Improvements
 Watauga County



- | | | | | |
|-------------------------|-------------------------|--------------------------------------------|-------------------|-------------------|
| Stream | Proposed Striping | Proposed Construction Limits | Proposed Median | Floodway |
| Proposed Bridge | Proposed Paved Shoulder | Proposed Drainage Structure to be Replaced | Historic Property | 100-Yr Floodplain |
| Proposed Edge of Travel | Proposed Retaining Wall | Proposed Removal of Asphalt Pavement | | |

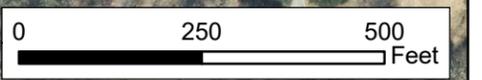


Figure 2E
Design and Surrounding Features
 TIP Project No. R-2566B
 NC 105 Improvements
 Watauga County



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|-------------------------|-------------------------|--------------------------------------------|-------------------|-------------------|
| Stream | Proposed Striping | Proposed Construction Limits | Proposed Median | Floodway |
| Proposed Bridge | Proposed Paved Shoulder | Proposed Drainage Structure to be Replaced | Historic Property | 100-Yr Floodplain |
| Proposed Edge of Travel | Proposed Retaining Wall | Proposed Removal of Asphalt Pavement | | |

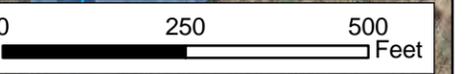
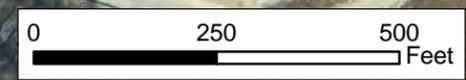


Figure 2F
Design and Surrounding Features
 TIP Project No. R-2566B
 NC 105 Improvements
 Watauga County



Figure 2H

Figure 2F

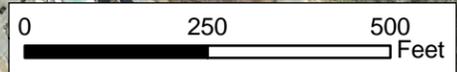
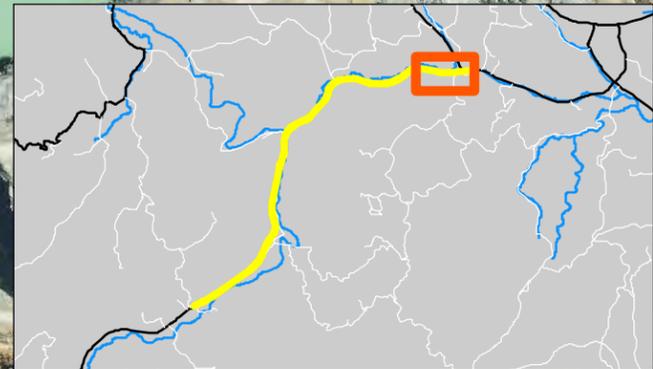


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|-------------------------|-------------------------|--------------------------------------------|-------------------|-------------------|
| Stream | Proposed Striping | Proposed Construction Limits | Proposed Median | Floodway |
| Proposed Bridge | Proposed Paved Shoulder | Proposed Drainage Structure to be Replaced | Historic Property | 100-Yr Floodplain |
| Proposed Edge of Travel | Proposed Retaining Wall | Proposed Removal of Asphalt Pavement | | |

Figure 2G
Design and Surrounding Features
 TIP Project No. R-2566B
 NC 105 Improvements
 Watauga County



Figure 2G



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|-------------------------|-------------------------|--------------------------------------------|-------------------|-------------------|
| Stream | Proposed Striping | Proposed Construction Limits | Proposed Median | Floodway |
| Proposed Bridge | Proposed Paved Shoulder | Proposed Drainage Structure to be Replaced | Historic Property | 100-Yr Floodplain |
| Proposed Edge of Travel | Proposed Retaining Wall | Proposed Removal of Asphalt Pavement | | |

Figure 2H
Design and Surrounding Features
 TIP Project No. R-2566B
 NC 105 Improvements
 Watauga County

APPENDICES

Appendix A – Agency Comments

Appendix B – Public Hearing Comments

Appendix C – Merger Concurrence Point Forms

Appendix D – Historic Architecture and Archaeology Reports – Cover Sheets

APPENDIX A
AGENCY COMMENTS



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

RECEIVED
Division of Highways
NOV 18 2016
Preconstruction
Project Development and
Environmental Analysis Branch

November 14, 2016

Mr. Eugene Tarascio, P.E.,
Project Development and Environmental Analysis Branch
North Carolina Department of Transportation
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

SUBJECT: EPA Review Comments of the Federal Environmental Assessment (EA) for the Proposed NC 105 Improvements from Clark's Creek Road (SR 1136) to NC 105 Bypass in Boone, Watauga County, North Carolina; TIP No.: R-2566B

Dear Mr. Tarascio:

The U.S. Environmental Protection Agency (EPA) has reviewed the subject document and is providing comments consistent with §309 of the Clean Air Act and §102(2)(C) of the National Environmental Policy Act (NEPA). The North Carolina Department of Transportation (NCDOT) and the Federal Highway Administration (FHWA) propose to improve a 5.5-mile section of NC 105 from Clark's Creek Roads (SR 1136) to NC 105 Bypass (SR 1107) in Boone, North Carolina. No improvements were proposed along the southernmost 1-mile section between Clark's Creek Road and the NC 105 / Old Shull's Mill Road.

The NC 105 Improvements project is in the NEPA/Section 404 Merger team process and the EPA has been an active member of this team and signed Concurrence Points 1 and 2 on August 13, 2014. Bridging decisions (Concurrence Point 2A) were agreed upon on October 14, 2015. The NCDOT's Project Commitments (i.e., the "Green Sheets") attest to the collaborative work between the NCDOT and the resource agencies. The EPA has provided specific technical review comments (See enclosure).

The EPA generally supports the proposed project's Purpose and Need and the Build Alternative. The EPA appreciates the opportunity to provide comments on the NC 105 project and requests a copy of the FONSI when it becomes available. Please include responses to our technical comments included in the enclosure.

The EPA anticipates remaining an active participant in the NEPA/§404 Merger process as the project continues to move forward. Please feel free to contact Dr. Cynthia F. Van Der Wiele of my staff at vanderwiele.cynthia@epa.gov or 919-450-6811 if you have any questions concerning these comments.

Sincerely,



Christopher A. Militscher
Chief, NEPA Program Office
Resource Conservation and Restoration Division

Enclosure – Detailed Review Comments

cc: Clarence Coleman, FHWA
Steven Kichefski, USACE Asheville Field Office
Marella Buncick, USFWS Asheville Field Office
David Wanucha, NCDWR Winston-Salem Regional Office
Marla Chambers, NCWRC

ENCLOSURE
EPA Technical Review Comments on the Federal EA
Proposed NC 105 Improvements
Watauga County, North Carolina
TIP No.: R-2566B

The NCDOT proposes to improve a 5.5-mile section of NC 105 from Clark's Creek Road to NC 105 Bypass in Boone, NC. The two primary purposes of the project are to: **reduce congestion** on NC 105 to achieve a level of service (LOS) D or better in the design year of 2040 during the average highest weekday and to achieve LOS E or better in 2040 during the average highest weekend day, and to improve **safety** (reduce rear-end and run-off-road crashes). A secondary purpose is to improve **bicycle infrastructure** on NC 105 where capacity or safety improvements are proposed in accordance with the *High Country Bike Plan* (March 2014).

Detailed Study Alternatives and Proposed Improvements

Three build alternatives were considered, including: 4-lane median-divided, new location, and best-fit widening; one was carried forward based on the NEPA/Section 404 Merger team. This alternative consists of: 6-foot paved shoulders; three 12-foot lanes from Old Shull's Mill Road and Broadstone Road (1.7 miles); and four 12-foot lanes and a 23-foot raised median from Broadstone Road to NC 105 Bypass (2.8 miles). The median-divided section will retain full movement at major intersections, but limit minor intersections and driveways to right-in/right-out access. Two intersections where Old Shull's Mill Road ties into NC 105 will also be improved. The southern intersection will be realigned, while the northern intersection will be closed. No improvements are recommended on the 1-mile section between Clark's Creek Road and the southern intersection of NC 105 / Old Shull's Mill Road as this portion is predicted to operate at an acceptable LOS in the future design year. The EPA supports the selection of the best-fit alternative as the environmentally-preferred alternative.

Four (4) of the six (6) existing major drainage structures are proposed to be replaced. The bridge over the Watauga River will be replaced with a bridge while Laurel Fork and two tributaries to Laurel Fork will be replaced with box culverts with sills and baffles. The EPA advocates for bridge design that transports and treats stormwater runoff before entering the Watauga River due to pollutant and thermal pollutant content.

Power, water, and sewer lines will need to be relocated due to the widening. If environmental impacts from these relocations have not been included in the table of impacts, the EPA requests that these be accounted for during subsequent NCDOT NEPA/Section 404 Merger team meetings as well as the FONSI document. The EPA requests that avoidance and minimization efforts be considered by the transportation agencies for these potential impacts.

The EA noted that landscaping will be designed as part of the final design. The EPA prefers landscape enhancements that incorporate native plant species that would be expected to be present within the plant communities along the project area, rather than the use of non-natives and/or ornamental plants.

Environmental Effects of the Proposed Action

Table S-1 (page S-3) summarizes the environmental impacts of the build alternative, including: 17 residential and 11 business relocations; 6 potential hazardous material sites; 0.2 acres of jurisdictional wetlands; and 3,270 feet of jurisdictional streams. The Watauga River is classified as a High Quality Waters (HQW) and as trout waters. Laurel Fork is also a trout water. In addition, there are nine Federally-listed species (6 no effect, 2 unresolved, and 1 no Biological Conclusion required) within the project corridor. Formal consultation is underway for *Corynorhinus townsendii virginianus* (Virginia big-eared bat) and *Myotis septentrionalis* (Northern long-eared bat).

Section 4(f) resources along the project corridor include the Prout-Atkins House and the Ed and Falah Hollars House. However, no impacts are anticipated, as the preferred alternative will not require any right-of-way from these properties. On June 7, 2016, a determination of ‘no effect’ was made on these two (2) historic properties.

The 29 noise-sensitive receptors located along the project corridor are predicted to experience noise levels approaching or exceeding FHWA Noise Abatement Criteria. Noise abatement was considered, but not recommended due to site access constraints (i.e., the driveways of each property and other side streets are located in such a way that noise barriers cannot be constructed properly to reduce noise). The EPA encourages the NCDOT to work with residential property owners along the project corridor to incorporate landscaping (e.g., hedgerows and other similar types of vegetative buffers), where appropriate, to mitigate potential noise impacts. In addition, the NCDOT may be able to implement signage prohibiting the use of “jake brakes” (compression release engine brakes) in residential areas along NC 105 to help alleviate truck noise.

Low-income populations reside within the project study area. The proposed best-fit widening alternative appears to distribute impacts to the human environment evenly. The proposed project is located in a region that complies with the National Ambient Air Quality Standards. The EPA agrees with the conclusion of the qualitative mobile source air toxics (MSAT) analysis that the project as proposed will not contribute substantively to lowering local air quality.



Kathryn Johnston
Secretary

J. Brian Ratledge
General Counsel

December 7, 2016

Mr. Eugene Tarascio
North Carolina Department of Transportation
Project Development & Environmental Analysis
1548 Mail Service Center
Raleigh, North Carolina 27699-1548

Re: SCH File # 17-E-4220-0246; EA; Widen NC 105 to a multi-lane facility from Clark's Creek Road to NC 105 Bypass in Boone. STIP 2566B

Dear Mr. Tarascio:

The above referenced environmental information has been reviewed through the State Clearinghouse under the provisions of the North Carolina Environmental Policy Act.

Attached to this letter are additional comments made by reviewer(s) of this document. Because of the nature of the comment(s), it has been determined that you may submit a Finding of No Significant Impact to the State Clearinghouse for compliance with the Act. The attached comments should be taken into consideration in project development.

Sincerely,

Crystal Best

State Environmental Review Clearinghouse

Attachments
cc: Region D



Environmental
Quality

PAT MCCRORY
Governor

DONALD R. VAN DER VAART
Secretary

MEMORANDUM

To: Crystal Best
State Clearinghouse Coordinator
Department of Administration

FROM: Lyn Hardison *LBH*
Division of Environmental Assistance and Customer Service
Permit Assistance & Project Review Coordinator

RE: 17-0246 – Additional Comments
Environmental Assessment – Widen NC 105 to a multi-lane facility from Clark’s Creek Road to NC
105 Bypass in Boone – STIP 2566B
Watauga County

Date: December 5, 2016

Please find attached additional comments from the NC Division of Water Resources which was received in this office after the response due date. They have some recommendations that need to be forwarded to the applicant and assembled into our previous comment package.

Thank you for the opportunity to respond.

Attachment





PAT MCCRORY
Governor
DONALD R. VAN DER VAART
Secretary
JAY ZIMMERMAN
DWR Director

December 1, 2016

MEMORANDUM

To: Lyn Hardison, Environmental Coordinator, Office of Legislative and Intergovernmental Affairs

From: Dave Wanucha, Division of Water Resources, Winston Salem Office *DJW* 12/1/16

Subject: Comments on the Environmental Assessment related to proposed NC 105 Improvements from Clark's Creek Road (SR 1136) to NC 105 bypass (SR 1107) in Boone, Watauga County. State Project 37512.1.5 NHPP-0150(004). TIP Project R-2566B. SEPA Project No. 17-0246.

This office has reviewed the referenced document dated September 22, 2016 (received on November 28, 2016). The NC Division of Water Resources (NCDWR) is responsible for the issuance of the Section 401 Water Quality Certification for activities that impact Waters of the U.S., including wetlands. It is our understanding that the project as presented will result in impacts to jurisdictional wetlands, streams, and other surface waters. NCDWR offers the following comments based on review of the aforementioned document:

Project Specific Comments:

1. This project is being planned as part of the 404/NEPA Merger Process. As a participating team member, NCDWR will continue to work with the team.
2. The Watauga River, Laurel Fork and their tributaries are Trout waters (Tr) of the State. The NCDWR recommends that the most protective sediment and erosion control BMPs be implemented to reduce the risk of turbidity violations in trout waters (i.e., Design Standards in Sensitive Watersheds). In addition, all disturbances within trout buffers should be conducted in accordance with NC Division of Land Resources and NC Wildlife Resources Commission requirements.
3. The Watauga River is classified as High Quality Waters (HQW) of the State. This is one of the highest classifications for water quality. Provided the project meets the requirements of NCDOT NPDES permit NCS000250, no application for individual State Stormwater permit will be required (Streamlining State Stormwater Permitting for NCDOT Projects letter, July 26, 2013).
4. The 401 Water Quality Certification application will need to specifically address the proposed methods for stormwater management. More specifically, stormwater shall not be permitted to discharge directly into streams or surface waters.

General Comments:

5. The NCDOT is respectfully reminded that all impacts, including but not limited to, bridging, fill, excavation and clearing, and rip rap to jurisdictional wetlands, streams, and riparian buffers need to be included in the final impact calculations. These impacts, in addition to any construction impacts, temporary or otherwise, also need to be included as part of the 401 Water Quality Certification Application.
6. In accordance with the Environmental Management Commission's Rules (15A NCAC 2H.0506[h]), mitigation will be required for impacts of greater than 150 linear feet to any single stream. In the event that



State of North Carolina | Environmental Quality

1611 Mail Service Center | Raleigh, North Carolina 27699-1611

919-707-9000

mitigation is required, the mitigation plan shall be designed to replace appropriate lost functions and values. The North Carolina Division of Mitigation Services may be available to assist with stream mitigation.

7. Where streams must be crossed, the NCDWR prefers bridges be used in lieu of culverts. However, we realize that economic considerations often require the use of culverts. Please be advised that culverts should be countersunk to allow unimpeded passage by fish and other aquatic organisms. Moreover, in areas where high quality wetlands or streams are impacted, a bridge may prove preferable. When applicable, the NCDOT should not install the bridge bents in the creek, to the maximum extent practicable.
8. Whenever possible, the NCDWR prefers spanning structures. Spanning structures usually do not require work within the stream or grubbing of the streambanks and do not require stream channel realignment. The horizontal and vertical clearances provided by bridges shall allow for human and wildlife passage beneath the structure. Fish passage and navigation by canoeists and boaters shall not be blocked. Bridge supports (bents) should not be placed in the stream when possible.
9. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means (grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. To meet the requirements of NCDOT's NPDES permit NCS000250, please refer to the most recent version of the *North Carolina Department of Transportation Stormwater Best Management Practices Toolbox* manual for approved measures.
10. Sediment and erosion control measures should not be placed in wetlands or streams.
11. Borrow/waste areas should avoid wetlands to the maximum extent practical. Impacts to wetlands in borrow/waste areas will need to be presented in the 401 Water Quality Certification and could precipitate compensatory mitigation.
12. Based on the information presented in the document, the magnitude of impacts to wetlands and streams may require an Individual Permit (IP) application to the Corps of Engineers and corresponding 401 Water Quality Certification. Please be advised that a 401 Water Quality Certification requires satisfactory protection of water quality to ensure that water quality standards are met and no wetland or stream uses are lost. Final permit authorization will require the submittal of a formal application by the NCDOT and written concurrence from the NCDWR. Please be aware that any approval will be contingent on appropriate avoidance and minimization of wetland and stream impacts to the maximum extent practical, the development of an acceptable stormwater management plan, and the inclusion of appropriate mitigation plans where appropriate.
13. If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills.
14. If temporary access roads or detours are constructed, the site shall be graded to its preconstruction contours and elevations. Disturbed areas shall be seeded or mulched to stabilize the soil and appropriate native woody species shall be planted. When using temporary structures, the area shall be cleared but not grubbed. Clearing the area with chain saws, mowers, bush-hogs, or other mechanized equipment and leaving the stumps and root mat intact allows the area to re-vegetate naturally and minimizes soil disturbance.
15. Unless otherwise authorized, placement of culverts and other structures in waters and streams shall be placed below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than 48 inches, to allow low flow passage of water and aquatic life. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of wetlands or streambeds or banks, adjacent to or upstream and downstream of the above structures. The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by the NCDWR. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact the NCDWR for guidance on how to proceed and to determine whether or not a permit modification will be required.

16. If multiple pipes or barrels are required, they shall be designed to mimic natural stream cross section as closely as possible including pipes or barrels at flood plain elevation, floodplain benches, and/or sills may be required where appropriate. Widening the stream channel should be avoided. Stream channel widening at the inlet or outlet end of structures typically decreases water velocity causing sediment deposition that requires increased maintenance and disrupts aquatic life passage.
17. If foundation test borings are necessary; it shall be noted in the document. Geotechnical work is approved under General 401 Certification Number 3883/Nationwide Permit No. 6 for Survey Activities.
18. Sediment and erosion control measures sufficient to protect water resources must be implemented and maintained in accordance with the most recent version of North Carolina Sediment and Erosion Control Planning and Design Manual and the most recent version of NCS000250.
19. All work in or adjacent to stream waters shall be conducted in a dry work area. Approved BMP measures from the most current version of the NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams and other diversion structures shall be used to prevent excavation in flowing water.
20. Heavy equipment should be operated from the bank rather than in stream channels in order to minimize sedimentation and reduce the likelihood of introducing other pollutants into streams. This equipment shall be inspected daily and maintained to prevent contamination of surface waters from leaking fuels, lubricants, hydraulic fluids, or other toxic materials.
21. Riprap shall not be placed in the active thalweg channel or placed in the streambed in a manner that precludes aquatic life passage. Bioengineering boulders or structures should be properly designed, sized and installed.
22. Riparian vegetation (native trees and shrubs) shall be preserved to the maximum extent possible. Riparian vegetation must be reestablished within the construction limits of the project by the end of the growing season following completion of construction.

The NCDWR appreciates the opportunity to provide comments on your project. Should you have any questions or require any additional information, please contact Dave Wanucha at (336) 776-9703 or Dave.Wanucha@ncdenr.gov.

Electronic copy only distribution:

Steve Kichefsky, US Army Corps of Engineers, Asheville Field Office
Dr. Cynthia Van Der Wiele, US Environmental Protection Agency
File Copy



◊ North Carolina Wildlife Resources Commission ◊

Gordon Myers, Executive Director

December 9, 2016

MEMORANDUM

TO: Jamille Robbins
Human Environment Section, NCDOT

FROM: Marla Chambers, Western NCDOT Coordinator *Marla Chambers*
Habitat Conservation Program, NCWRC

SUBJECT: Review of the Environmental Assessment document for NCDOT's proposal to improve NC 105 from Clark's Creek Road (SR 1136) near Foscoe to NC 105 Bypass (SR 1107) in Boone, Watauga County. TIP No. R-2566B.

The North Carolina Department of Transportation has submitted for review an Environmental Assessment document for the subject project. Staff biologists with the North Carolina Wildlife Resources Commission have reviewed the information provided. These comments are provided in accordance with the provisions of the state and federal Environmental Policy Acts (G.S. 113A-1 through 113-10; 1 NCAC 25 and 42 U.S.C. 4332(2)(c), respectively), the Clean Water Act of 1977 (33 U.S.C. 466 et seq.) and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661-667d), as applicable.

The NCDOT proposes to improve NC 105 from Clark's Creek Road (SR 1136) near Foscoe to NC 105 Bypass (SR 1107) in Boone. NCWRC submitted scoping comments, dated February 18, 2010, on the larger R-2566 project from Linville in Avery County to Boone in Watauga County. The project has been shortened to the B section in light of traffic forecasts. Our comments were included in the EA document. We concur with the project commitments to use Design Standards in Sensitive Watersheds and to adhere to the trout moratorium from October 15 to April 15. NCDOT is in formal consultation with the USFWS for this project regarding the federally Endangered Virginia big-eared bat and Threatened northern long-eared bat.

The Watauga River (Class B; Tr; HQW) runs parallel to NC 105 along the southern half the project and Laurel Fork (Class C; Tr) runs parallel along the northern portion. The Watauga

River supports a significant population of hellbender (Federal Species of Concern and State Special Concern) and a portion of it, approximately from Old Shull's Mill Road northward, is designated a Significant Natural Heritage Area. The EA also indicates that the Watauga River is on the 303(d) list of impaired waters for turbidity throughout the project area. Both waterways support Brown and Rainbow Trout.

NCWRC has participated in the Merger process for the development of this project. As the Environmental Assessment pointed out, the Merger Team "agreed to make the fewest improvements possible to meet the project purpose and need, which could result in a varying typical section or make no improvements along a portion of the 5.5-mile corridor" of the B section. Current preliminary design proposes no improvements to the southernmost 1-mile section, widening to 3 lanes (one northbound, two southbound) between Old Shull's Mill Road and Broadstone Road, and widening to a 4-lane divided facility for the northern portion of the project. The widened sections are also proposed to have 6-foot paved shoulders to meet a secondary purpose of improving bicycle facilities.

While we agree with using a "Best Fit" alignment for the project, we are not yet convinced that the typical sections of the preliminary design are truly making the fewest improvements possible and minimizing impacts along the corridor. Current design (with a 25-foot buffer around slope stakes) is anticipated to impact 0.2 acres of wetlands and 3,270 linear feet of stream at the 19 stream crossings. We are particularly concerned about portions of the proposed 3-lane section where the Watauga River is in closer proximity to the roadway and steep mountainous terrain occurs on the opposite side of the road. We recommend avoiding or minimizing impacts to the river floodplain and natural vegetated buffer that protects water quality and serves as habitat and a travel corridor for wildlife. We also recommend avoiding or minimizing cuts into the mountainsides to prevent additional sediment sources and to preserve habitat and aesthetic qualities.

The Citizens Plan for Watauga (2009) identifies NC 105 as the "Grandfather Gateway" to Boone and calls for it to be an economic and aesthetic entranceway to Boone, according to the EA. The Watauga County Parks and Recreation Comprehensive System-wide Plan (2010) includes the proposed Laurel Creek-Watauga River Trail, which runs parallel to NC 105 and along the Watauga River. Avoiding impacts to the mountainsides and riparian corridor along the river appear to be in line with the local plans.

Traffic data presented in the EA show that the only road segments of the project that are predicted to be at an unacceptable level of service for certain time periods in the design year 2040 are north of Broadstone Road, which is proposed to be widened to a 4-lane divided roadway. One intersection in the proposed 3-lane portion and one intersection where no improvements are planned are predicted to have an unacceptable LOS in 2040 in both the No-Build and Build scenarios for certain times of day or week. We assume extra turn lanes or adding signalization could improve intersection LOS, however the data for the road sections appears to indicate that additional capacity is not required for acceptable LOS. The second southbound lane of the 3-lane section would serve as a passing lane and therefore may provide some benefit. We recommend that the third lane be discontinued in areas where the space between the river and the mountainside narrows, such as the stretch south of Broadstone Road.

Our scoping comments indicated that wildlife crossings should be provided along the project to reduce habitat fragmentation and improve safety. Other than the bridge over the Watauga River, which will be replaced with another bridge, no other stream crossing has been shown to be feasible or practicable to be replaced with a bridge during project development to this point. Existing culverts are proposed to be replaced with larger culverts or extended. Crash data in the EA did not address collisions with wildlife. We request additional investigation into this issue that identifies any wildlife collision hotspots to help determine the need for formal wildlife crossings. Minimizing the project footprint by reducing the typical section in certain areas may improve safety by minimizing these types of crashes.

The brief Indirect and Cumulative Effects sections of the EA indicated that the rate of population growth within the study area between 1990 and 2000 exceeded the rate of both the county and state for that timeframe. A growing tourism sector and second home market is expected to continue to support residential and commercial development. The proposed project construction would more than double the amount of impervious surface associated with NC 105. Due to topographic constraints, future development in the area is expected to “remain relatively modest” and “mainly consist of in-fill development which is expected to add to the total amount of impervious surfaces near the Watauga River.” The document states “the proposed project will notably contribute to cumulative impacts to water quality in the absence of stormwater management regulations requiring Best Management Practices”. We believe that stormwater treatment and other low-impact design measures will be important for both the direct impacts of the project and future development to protect important sensitive resources.

We continue to recommend context sensitive solutions to minimize impacts to aquatic and terrestrial resources along the project and ensure compatibility with the natural and human environment of the area. Further minimization of the footprint and impacts should be pursued for all portions of the project. We encourage NCDOT and local officials to work together and to use low impact development techniques to maximize the management of storm water quantity and quality in the project area. Information on LID measures can be found at www.lowimpactdevelopment.org, <http://www.epa.gov/owow/nps/lid/lidnatl.pdf> and <http://www.stormwatercenter.net/>. Other important protective measures can be found in the Guidance Memorandum to Address and Mitigate Secondary and Cumulative Impacts to Aquatic and Terrestrial Wildlife Resources and Water Quality at http://www.ncwildlife.org/portals/0/Conserving/documents/2002_GuidanceMemorandumforSecondaryandCumulativeImpacts.pdf

Thank you for the opportunity to review and comment on this project. If you have any questions regarding these comments, please contact me at marla.chambers@ncwildlife.org or (704) 982-9181.

Cc: Marella Buncick, USFWS
Cynthia Van Der Wiele, USEPA
Dave Wanucha, NCDWR
Steve Kichefski, USACE



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Asheville Field Office
160 Zillicoa Street Suite #B
Asheville, North Carolina 28801

June 28, 2018

Mr. Phil Harris
North Carolina Department of Transportation
Project Development and Environmental Analysis Unit
1598 Mail Service Center
Raleigh, NC 27699-1598

Subject: Endangered Species Concurrence for the Proposed Improvements to NC 105 From SR 1136 to SR 1107, Including Replacing Bridge No. 5 Over the Watauga River, Watauga County, North Carolina, TIP Project Nos. R-2566B and R-2566BA.

Dear Mr. Harris:

We have reviewed your concurrence request and supporting documentation regarding potential impacts to the federally endangered Virginia big-eared bat (*Corynorhinus townsendii virginianus*) and gray bat (*Myotis grisescens*) from implementation of the subject project. We provide the following comments in accordance with the provisions of section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1543) (Act).

The North Carolina Department of Transportation (NCDOT) proposes to widen NC 105 from the NC 105 By-pass in Boone to Clark's Creek Road near Foscoe in Watauga County. The project length is about 5.5 miles and includes widening the existing roadway and replacing the bridge over the Watauga River.

At the time this project was originally proposed, there was a known Virginia big-eared bat (VBEB) hibernaculum near the project but there was little to no information about where those bats went in the summer and if a maternity colony was present in the area. In an effort to address these questions regarding VBEBs and potential project impacts, an extensive two year monitoring project, led by Indiana State University (ISU), was conducted from 2013 through 2014. ISU scientists captured 42 female and 2 male VBEBs, fitted them with radio transmitters and tracked them to 35 roost sites including the first known maternity roost site for this species in North Carolina.

All of the summer roosts, with the exception of one, are located in Avery County well to the north and west of the project area. One maternity roost is located in Watauga County near Beech Mountain (~11km northwest of the project). While foraging at night, most bats foraged inside and away from the boundaries of NC 105 in Avery County, near their summer roost sites. The widening for R-2566B and BA, is in an area where Virginia big-eared bats are not known to forage.

Because gray bats are known to use bridges and culverts as roosts, all existing structures impacted by the project that could provide suitable roost habitat for bats were examined for evidence of bat use and none was found. In addition no gray bats are documented from hibernacula in the area and none were seen in summer roost sites occupied by VBEB.

Based on the results of the VBEB monitoring and movement data in the project area, negative structure checks, and a commitment by NCDOT to inspect the existing bridge over the Watauga River for bats prior to bridge demolition, we agree that implementation of this project is “not likely to adversely affect” Virginia big-eared and gray bats. Therefore, the requirements under section 7(c) of the Act are fulfilled. However, obligations under section 7 of the Act must be reconsidered if: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner not previously considered, (2) this action is subsequently modified in a manner that was not considered in this review, or (3) a new species is listed or critical habitat is determined that may be affected by the identified action.

If you have questions about these comments please contact Ms. Marella Buncick of our staff at 828/258-3939, Ext. 237. In any future correspondence concerning these projects, please reference our Log Number 10-244.

Sincerely,



Janet Mizzi
Field Supervisor

cc (electronic): Felix Davila, FHWA
Marissa Cox, NCDOT

APPENDIX B
PUBLIC HEARING COMMENTS



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

MEMO TO: Post Hearing Meeting Attendees

FROM: Bryan Key, P.E.
Roadway Design Project Design Engineer

DATE: February 2, 2017

SUBJECT: Project 37512.1.5 (R-2566B) Watauga County
F. A. Project NHPP-0150(004)
Proposed NC 105 Improvements from Clark's Creek Road to NC 105 Bypass in Boone

Post Hearing Meeting Minutes

The post hearing meetings was held at 10:00 on January 20, 2017 to discuss the comments received from the subject project's Combined Public Hearing. This hearing was held on Monday, November 7, 2016 at the Watauga Campus of Caldwell Community College & Technical Institute in Boone. Nearly 100 people attended this informal drop-in style public hearing.

Below is an **executive summary** of the main issues concerning the project, with a more detailed explanation of those concerns following.

Executive Summary

- A primary purpose of this project is to reduce congestion on NC 105 in order achieve a level of service (LOS) D or better in the design year (2040) during the average highest week day, and to achieve LOS E or better in the design year during the average highest weekend day. Another primary purpose is to reduce rear-end and run-off-road crashes on NC 105. A secondary purpose is to improve bicycle facilities on NC 105 in areas where capacity or safety improvements are proposed.
- A few citizens questioned the need for widening NC 105.
- Several citizens suggested changes to the design at Old Shull's Mill Road and other locations.
- Some citizens that support the project requested temporary fixes on NC 105.

More information is at the project website, <https://www.ncdot.gov/projects/nc105widening/>.

MAJOR CONCERNS:**A.) PROJECT IS UNNECESSARY**

1. David Finck, a resident in Watauga County, is opposed to widening NC 105, and feels the only improvements needed are adding a turn lane at Broadstone Road and adding road reflectors.
2. Julie Mayfield, Co-Director of MountainTrue, recommends using a narrower median to reduce impacts and build a more appropriately sized road.
3. Carol Quintero of Vilas is opposed to widening NC 105, and feels the only improvements needed are adding a turn lane at Broadstone Road.

RESPONSE:

The purpose of this project is to address congestion and safety needs along NC 105. Existing traffic analysis shows that segments of the corridor are over capacity, and this situation is expected to worsen by the design year of 2040. The corridor has experienced notable safety issues over the past ten years, and conditions are expected to worsen as traffic volumes increase. The Broadstone Road intersection is the greatest need along the corridor, and will be improved sooner than the rest of the corridor.

B.) DESIGN AT OLD SHULL'S MILL ROAD

Several citizens had questions or comments about the design at the Old Shull's Mill Road intersections.

GENERAL RESPONSE:

The northern intersection is proposed to be closed, and the southern intersection will be realigned to address sight distance and safety concerns at both locations. Revisions to the design at the Old Shull's Mill Road intersection will be considered during final design.

ADDITIONAL SPECIFIC RESPONSES:

1. Nancy Allen from Sugar Maple Lane (near Shull's Mill Road) is concerned that closing the northern Old Shull's Mill Road intersection will increase traffic at the southern intersection, affecting the viewshed of the properties near the southern intersection.
 - *There are currently about 600 vehicles per day that use each of the Old Shull's Mill Road intersections. Closing the northern intersection would shift those vehicles to the southern intersection.*
2. Steve Loflin from Valle Crucis resent a letter previously provided following the June 2015 public meeting. In that letter, Mr. Loflin expressed concern about the safety of the grade and the fill required at the proposed realigned intersection of NC 105 and Old Shull's Mill Road. He noted that it appeared the design had not changed following his 2016 letter. He suggested moving the intersection approximately 150 feet to the south.
 - *This suggestion was studied following the 2015 public meeting. The current design meets vertical and horizontal sight distance requirements for a 60 mph design speed. The intersection was not moved because the*

reduction in fill would not justify the higher impacts. A jurisdictional stream is located approximately 150 feet to the south. Moving the intersection would flatten the grade, but would still require about 12 feet of fill (compared with about 16 feet of fill for the current design). An intersection further south would have a sharper skew.

3. S.E. Taylor noted safety and sight distance concerns between the two Old Shull's Mill Road intersections.
 - *The proposed horizontal sight distance between the two Old Shull's Mill Road intersections meets requirements for a design speed of 55 mph, which matches the posted speed limit in this section. Flattening the curve through this section would result in steep rock cuts on the west side of the road. The vertical sight distance meets requirements for a design speed of 60 mph except in two locations; those two sections will be revised during final design to meet a design speed of 60 mph.*
4. Sean Weddell from Boone suggested leaving the northern intersection of NC 105 and Old Shull's Mill Road open to bicyclists and pedestrians to provide a safer route (rather than NC 105) through this section.
 - *Keeping the northern intersection open to bicyclists and pedestrians will be considered during final design.*
5. Rob and Fran Hannah of Hound Ears suggested realigning the intersection of NC 105 and Old Shulls Mill Road, with addition of a traffic signal.
 - *A traffic signal is not warranted at this intersection. If traffic volumes increase and a signal is warranted in the future, NCDOT will study the intersection through a separate project.*

C.) OTHER SPECIFIC DESIGN QUESTIONS/CONCERNS

Several citizens commented on other design elements.

GENERAL RESPONSE:

The Environmental Assessment (September 2016) studied the environmental effects of the alternatives studied. The Finding of No Significant Impact (FONSI) will address final effects following the public hearing and selection of the preferred alternative. Changes in design will be considered during final design.

ADDITIONAL SPECIFIC RESPONSES:

6. Paula Finck, a resident in Watauga County, supports the project but is concerned about noise, stream, and flooding impacts. She suggested that by the beginning of construction in 2025, new methods may be available to reduce cut into rock, and asked what would be done with the rock that is removed. She is concerned about the biological conclusions of the threatened and endangered species. She opposes widening Broadstone Road.
 - *Current construction methods will be used at the time of construction.*

7. Joe Furman of Boone and Kelvin Gryder suggested rerouting Poplar Grove Road South (SR 1552) to connect with NC 105 directly opposite SR 1107, creating an intersection at the existing traffic signal as part of this project.
 - *Due to the vertical elevation difference between NC 105 and Poplar Grove Road, it would not be feasible to make this connection without building a new location section curving up the slope.*
8. Kelly Melton of Banner Elk suggested using erosion control and stabilization, particularly near River Bluff Drive to ensure the road/access is not compromised when NC 105 is widened that direction.
 - *Best management practices will be incorporated into final design and construction.*
9. Harris Prevost suggested adding a left turn lane at Mill Ridge.
 - *This intersection is outside of the R-2566B study area.*
10. Billy Trott is concerned about safety and traffic operations at the intersection of NC 105 and Broadstone Road.
 - *The proposed design will widen NC 105 to four lanes with necessary turn lanes at the intersection.*
11. Mike Wilson of Boone and Perry Yates of New River Building Supply suggested adding accommodations (such as turn lanes and crossovers) for large trucks.
 - *A left-turn lane will be added at the Vulcan driveway. Additional median breaks, turn lanes, and U-turn locations will be considering during final design through coordination with local property owners.*
12. Kent Moberg, who lives and owns a vacation rental business in Blowing Rock, resent a letter previously provided in 2011. He is opposed to widening NC 105. He feels the proposed 130-foot minimum width is not appropriate for the designated NC Scenic Byway route. He is concerned about the environmental impact, and specifically mentioned several threatened and endangered species. He feels that the construction process will affect fishermen and kayakers, and that ruining the scenic vistas will affect his rental business. He is concerned that access will be closed to Old Tweetsie Road.
 - *The proposed width meets current design standards for the proposed design speed and anticipated traffic volumes. NC 105 will remain open during construction. Old Tweetsie Road will be reconnected with NC 105 just north of the proposed bridge.*

D.) SUPPORT THE PROJECT BUT NEED TEMPORARY IMPROVEMENTS

1. Burgess, living on Old Tweetsie Road, supports this project.
2. Benjamin Crabtree on NC 105 South supports acquisition of one cabin on his property that is exposed to traffic on NC 105 and Baird's Creek Road.
3. J.A. Miller of Boone supports this project, and asks for NCDOT to fill in the potholes in the shoulders in the meantime.

RESPONSE:

These requests will be considered by the NCDOT Division office.

E.) CONCERN ABOUT IMPACTS

1. Kenneth Hayes of Boone noted that this project will acquire his wife's business.
2. Matthew Howard asked about maintaining traffic during construction, and suggested detouring traffic (particularly visitors).
3. Dwayne Hunt of Vilas is concerned about impacts to the Watauga River, particularly during construction.
4. Stephen and Betty Sugg noted that this project will impact their well and septic system.

RESPONSE:

Designs shown at the public hearing are preliminary designs, and based on preliminary survey data. Therefore, the exact impact to individual properties is subject to change. Impacts have been minimized to the Watauga River and other natural and human resources. A traffic control management plan will be developed during final design.

F.) OTHER COMMENTS

1. A commenter (name and address withheld) asked about a Spanish translator at the public hearing.

RESPONSE:

A Right to Language Access notice in Spanish was included on the October 2016 mailer advertising the public hearing, with a phone number to contact for Spanish-speaking assistance. No requests were made for language assistance prior to or during the meeting.

If anyone has any questions or comments regarding this information, please let me know at bckey@ncdot.gov or 919-707-6263.

BCK/trg

Cc: Post Hearing Meeting Attendees *

APPENDIX C
MERGER CONCURRENCE POINT FORMS

Section 404/NEPA Interagency Agreement

Concurrence Point 1
Project Purpose and Need

Project Title: NC 105 Improvement from Clarks Creek Road to NC 105 Bypass
TIP Project No.: R-2566B
WBS No.: 37512.1.1

Purpose and Need of the Proposed Action:

Congestion: A primary purpose of the project is to reduce congestion on NC 105 in order to achieve LOS D or better in the design year (2040) during the average highest week day, and to achieve LOS E or better in the design year during the average highest weekend day.

Safety: Another primary purpose is to reduce rear-end and run-off-road crashes on NC 105. Alternatives will be analyzed using Highway Safety Manual methodologies.

Bicycle Facilities: A secondary purpose is to improve bicycle facilities on NC 105 in areas where capacity or safety improvements are proposed.

The Project Team has concurred on the above mentioned purpose and need and the attached study corridor map for the proposed project.

<u>Name</u>	<u>Agency</u>	<u>Date</u>
<u>Michael J. Ziegler</u>	FHWA	8-15-14
<u>Cynthia J. VanderWiele</u>	USEPA	13 Aug. 2014
<u>Andrew Williams</u>	USACE	13 August 2014
<u>Mark L. Zornick</u>	USFWS	13 August 14
<u>Erin J.</u>	NCDOT	17 August 14
<u>Marla Chambers</u>	NCWRC	8/13/2014
<u>Dr. J. W. L.</u>	NCDWR ^B	Aug 13, 2014
<u>Renee Hedrick-Easley</u>	NCSHPO	8-19-14
<u>David Graham</u>	WARPO	8/21/14

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**Concurrence Point 2
Detailed Study Alternative Carried Forward**

Project Title: NC 105 Improvement from Clarks Creek Road to NC 105 Bypass
 TIP Project No.: R-2566B
 WBS No.: 37512.1.1

Alternative(s) to Study in Detail:

- Best-Fit Build Alternative
- No Build

The Project Team has concurred with the above alternative to be carried forward for the proposed project.

<u>Name</u>	<u>Agency</u>	<u>Date</u>
<i>Michael J. Fitzgerald</i>	FHWA	8-13-14
<i>Cynthia J. VanDerWiele</i>	USEPA	13 Aug. 2014
<i>Andrew Williams</i>	USACE	13 August 2014
<i>Marla Chambers</i>	NCWRC USFWS	8/13/2014
<i>Elm. J. J.</i>	NCDOT	8/13/2014
<i>Walter C. Justice</i>	USFWS NCWRC	13 August 14
<i>Bill W. W.</i>	NCDWR	Aug 13, 2014
<i>Penae Blackbill-Easley</i>	NCSHPO	8-19-14
<i>David Graham</i>	BARPO	8/21/14

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**Concurrence Point 2A
Bridging Decisions and Alignment Review**

Project Title: NC 105 Improvement from Clarks Creek Road to NC 105 Bypass
 TIP Project No.: R-2566B
 WBS No.: 37512.1.1

The Project Team has concurred on this date to include the following major hydraulic structures as part of the detailed study alternatives:

- Site 1 – Remove and replace existing bridge over the Watauga River to 260' L x 90' W
- Site 2 – Remove and replace existing culvert carrying a UT to Laurel Fork to 1 @ 8'x6' RCBC
- Site 4 – Remove and replace existing culvert carrying a UT to Laurel Fork to 1 @ 8'x6' RCBC
- Site 6 – Remove and replace existing culvert carrying a UT to Laurel Fork to 2 @ 12'x7' RCBC
- Site 7a – ~~Retain existing structural steel pipe~~ (on private property; more study recommended)
- Site 7b – ~~Retain existing structural steel pipe~~ (on private property; more study recommended)

<u>Name</u>	<u>Agency</u>	<u>Date</u>
<i>Michael J. Jolley</i>	FHWA	
<i>Cynthia F. VanderWick</i>	USEPA	10.14.2015
<i>John K. Johnson</i>	USACE	10/14/2015
<i>Walter L. Baele</i>	USFWS	11/16/15
<i>Doreen Kell</i>	NCDOT	10/14/15
<i>Marla Chambers</i>	NCWRC	10/14/2015
<i>Dr. J. W. ...</i>	DEQ NCDWR	10.14.15
<i>Reese Medhill-Sauley</i>	NCSHPO	11/9/15
<i>David Graham</i>	RPO	11/9/15

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Concurrence Point 3
Least Environmentally Damaging Practicable Alternative (LEDPA)

Project Title: NC 105 Improvement from Clarks Creek Road to NC 105 Bypass
TIP Project No.: R-2566B
WBS No.: 37512.1.1

The Project Team has concurred on this date to select the Best-Fit Build Alternative as the LEDPA for Project R-2566B.

<u>Name</u>	<u>Agency</u>	<u>Date</u>
<i>Felix Diller</i>	FHWA	3-15-17
<i>Cynthia F. Van Der Wiele</i>	USEPA	3.15.2017
<i>John K. ...</i>	USACE	3/24/2017
<i>M. L. ...</i>	USFWS	3/15/17
<i>Cyrene ...</i>	NCDOT	3-15-2017
<i>Marla Chambers</i>	NCWRC	3-15-2017
<i>D. J. ...</i>	NCDWR	3-16-2017
<i>Debra Medhill-Early</i>	NCSHPO	3-16-17
<i>David Graham</i>	RPO	3/16/17

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Concurrence Point 4A Avoidance and Minimization Measures

Project Title: NC 105 Improvement from Clarks Creek Road to NC 105 Bypass
 TIP Project No.: R-2566B
 WBS No.: 37512.1.1

The Project Team has concurred on this date to use the following measures to minimize or avoid impacts. The typical section varies along the project corridor, and was selected so that the project would meet the purpose and need of the project with the minimal footprint feasible. Of the 5.5-mile corridor studied, this resulted in 1.7 miles of 3-lane road, 2.8 miles of 4-lane divided road, and 1 mile with no improvements. In addition, the following avoidance and minimization measures were included in the design:

- Selected a best-fit alignment that minimizes impacts to Watauga River, Laurel Fork, and Big Branch, including widening asymmetrically in several locations.
- Shifted the alignment to the west between Sta 176+00 and 265+00 to reduce impacts on animal passageway parallel with the Watauga River and floodplains.
- Added several retaining walls and concrete barriers to further reduce impacts to streams.
- Used steeper slopes to minimize or avoid impacts in several locations.

The following commitments have been made, and will be discussed again at the CP 4B and 4C meetings:

- The feasibility of holding the existing utility line between old Shull's Mill Road (north) and Broadstone Road will be investigated.
- Temporary construction easements will be kept outside of the floodplain, floodway, and Watauga River where feasible.
- Permanent construction and slope stakes will stay out of 100-year floodplain, floodway, and Watauga River. If not feasible, the Merger team will revisit CP 4A.
- Section BA will not be constructed until sufficient information is available to apply for a phased permit

<u>Name</u>	<u>Agency</u>	<u>Date</u>
<i>Felix D'Amico</i>	FHWA	3/21/18
	USEPA	
<small>DocuSigned by:</small> <i>Steve Kiehnfski</i>	USACE	4/10/2018
<small>730224FBC5524DF...</small> <i>Monika Juncos</i>	USFWS	3/21/18
<i>NATHAN ADIMA</i>	NCDOT	3/21/18
<i>Monika Chambers</i>	NCWRC	3/21/2018
<small>DocuSigned by:</small> <i>David J. Wanucha</i>	NCDWR	3/27/2018
<small>89738FD148F34AD...</small> <i>Renee Gledhill-Earley</i>	NCSHPO	3/26/2018
<small>DocuSigned by:</small> <i>David Graham</i>	RPO	3/27/2018
<small>C26A1956A273464...</small> <small>D29CE8E3847D495...</small>		

APPENDIX D
HISTORIC ARCHITECTURE AND ARCHAEOLOGY REPORTS – COVER SHEETS

16-04-0010



HISTORIC ARCHITECTURE AND LANDSCAPES ASSESSMENT OF EFFECTS FORM

This form only pertains to Historic Architecture and Landscapes for this project. It is not valid for Archaeological Resources. You must consult separately with the Archaeology Group.

PROJECT INFORMATION

Project No:	R-2566B	County:	Watauga
WBS No.:	37512.1.1	Document Type:	EA/FONSI
Fed. Aid No:	N/A	Funding:	<input checked="" type="checkbox"/> State <input type="checkbox"/> Federal
Federal Permit(s):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Permit Type(s):	
<u>Project Description:</u>			
Widen NC 105 to a multi-lane facility from Old Shull's Mill Road to NC 105 Bypass.			

SUMMARY OF HISTORIC ARCHITECTURE AND LANDSCAPES REVIEW

<u>Description of review activities, results, and conclusions:</u>
Review of HPO quad maps, HPO GIS information, historic designations roster, and indexes was undertaken on April 21, 2016. Based on this review, R-2566B was surveyed in June 2013 and two resources were determined eligible, the Prout-Atkins House (WT304) and the Ed and Falah Hollars House (WT 376). The State Historic Preservation Office concurred with these findings on September 3, 2013. An effects meeting with SHPO is required to assess the project.

ASSESSMENT OF EFFECTS

Property Name:	Prout-Atkins House	Status:	Determined Eligible/Study Listed
Survey Site No.:	WT304	PIN:	1888491759000
Effects			
<input checked="" type="checkbox"/> No Effect <input type="checkbox"/> No Adverse Effect <input type="checkbox"/> Adverse Effect			
<u>Explanation of Effects Determination:</u>			
No proposed work within boundary, Project starts north of property.			
<u>List of Environmental Commitments:</u>			

Property Name:	Ed & Falah Hollars House	Status:	Determined Eligible
Survey Site No.:	WT376	PIN:	1990121053000
Effects			
<input checked="" type="checkbox"/> No Effect <input type="checkbox"/> No Adverse Effect <input type="checkbox"/> Adverse Effect			
<u>Explanation of Effects Determination:</u>			
No proposed work within the property boundary.			
<u>List of Environmental Commitments:</u>			

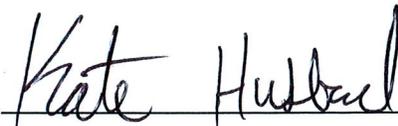
FHWA Intends to use the State Historic Preservation Office's concurrence as a basis for a "de minimis" finding for the following properties, pursuant to Section 4(f):

SUPPORT DOCUMENTATION

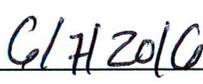
Map(s)
 Previous Survey Info.
 Photos
 Correspondence
 Design Plans

FINDING BY NCDOT AND STATE HISTORIC PRESERVATION OFFICE

Historic Architecture and Landscapes – ASSESSMENT OF EFFECTS



 NCDOT Architectural Historian



 Date



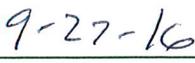
 State Historic Preservation Office Representative



 Date



 Federal Agency Representative



 Date

Funding Changed to Federal 9/8/2016



**NO NATIONAL REGISTER OF HISTORIC PLACES
ELIGIBLE OR LISTED ARCHAEOLOGICAL SITES
PRESENT FORM**



This form only pertains to ARCHAEOLOGICAL RESOURCES for this project. It is not valid for Historic Architecture and Landscapes. You must consult separately with the Historic Architecture and Landscapes Group.

PROJECT INFORMATION

Project No: R-2566B *County:* WATAUGA
WBS No: 37512.1.1 *Document:* ENVIRONMENTAL ASSESSMENT/
FINDING OF NO SIGNIFICANT IMPACT
F.A. No: NHPP-0150(004) *Funding:* State Federal
Federal Permit Required? Yes No *Permit Type:* INDIVIDUAL

Project Description:

Improve NC 105 from Clark's Creek Rd. (SR 1136) in Foscoe to the NC 105 Bypass (SR 1107) in Boone in Watauga County. However, to meet the project's purpose and need, improvements were determined to be necessary only along the 7.2 kilometers (4.5 miles) of that corridor from Old Shulls Mill Road to the NC 105 Bypass in Boone. The project also includes the replacement of Bridge 5 on NC 105 over the Watauga River (R-2566BA). The Area of Potential Effects (A.P.E.) is approximately 7.2 kilometers (4.5 miles) long and 27 meters (90 ft.) wide at its widest. Design plans have been provided.

SUMMARY OF ARCHAEOLOGICAL FINDINGS

See attached report describing the 2012 reconnaissance and the 2017 archaeological survey.

The North Carolina Department of Transportation (NCDOT) Archaeology Group reviewed the subject project and determined:

- There are no National Register listed or eligible ARCHAEOLOGICAL SITES present within the project's area of potential effects. (Attach any notes or documents as needed)
- No subsurface archaeological investigations were required for this project.
- Subsurface investigations did not reveal the presence of any archaeological resources.
- Subsurface investigations did not reveal the presence of any archaeological resources considered eligible for the National Register.
- All identified archaeological sites located within the APE have been considered and all compliance for archaeological resources with Section 106 of the National Historic Preservation Act and GS 121-12(a) has been completed for this project.

Brief description of review activities, results of review, and conclusions:

This project was first assigned for Cultural Resources Review in March 2012 (TIP R-2556) as

"NC 105 Improvements from Linville to Boone in Avery and Watauga Counties." It was not part of the Programmatic Agreement (PA) review process for minor transportation projects. The scope of the project was later reduced to include only the segment from Foscoe to Boone in Watauga County. In April 2016 the project was submitted for Cultural Resources Review under the PA. An Archaeological Survey Required form was submitted on 5/9/2016. A revised Archaeological Survey Required form containing a description of an archaeological reconnaissance was submitted on 3/15/2017.

The attached report includes a description of an archaeological reconnaissance that was conducted in 2012. The reconnaissance report describes the archaeological potential of the entire A.P.E. It found the most of the landforms within the A.P.E. have a low potential for archaeological sites. It identified only one section of the A.P.E. with potential for archaeological sites. It recommended an archaeological survey of the improvements to the NC 105/ SR 1568 (Old Shull's Mill Road) interchange. This part of the A.P.E. includes a section of terrace/floodplalin along the Watauga River, as well as a previously recorded historic archaeological site (31WT371**).

The attached report also contains a description of the results of the archaeological survey conducted in April 2017. The survey identified two historic archaeological sites, 31WT371** and 31WT396**. These sites are believed to be the former locations of the Robbins Hotel and an unidentified business supporting the Boone Fork Lumber Company located a short distance to the east. Both sites are recommended ineligible for the National Register of Historic Places, (NRHP), and no further archaeological work is recommended for this project.

SUPPORT DOCUMENTATION

See attached: Map(s) Previous Survey Info Photos Correspondence
Signed:

CALEB SMITH

5/18/2017

NCDOT ARCHAEOLOGIST

Date